



# Bark Beetles

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## Biology and Life Cycle

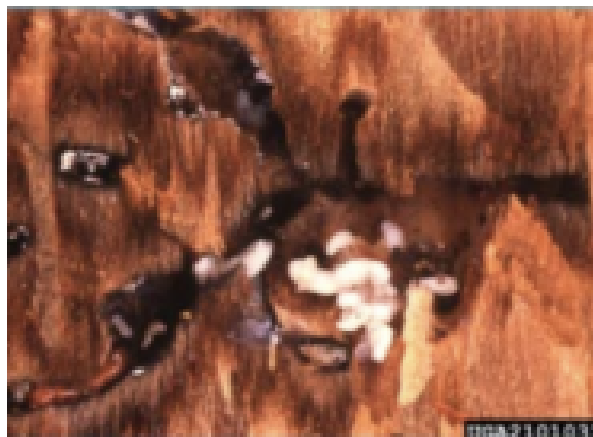
Bark beetles have hard, smooth, stout bodies and range from 1.3 to 2.9 mm in length, depending on gender and species. The majority of bark beetles are female; males are smaller and flightless. Adult beetles can be reddish brown or black in color, while larvae are white and legless. Female bark borers seek out stressed woody plants as their breeding grounds since healthy trees are able to resist infection. They excavate a gallery of tunnels and chamber systems into twigs or branches, where they introduce a symbiotic ambrosial fungus that infects the plant and serves as the brood's food source. The beetles then lay their eggs in the tunnels over several days, which hatch and develop over the course of about two months. Newly matured females mate with their brother(s) before leaving the gallery to find new host plants.



*Photo credit: J.R. Baker & S.B. Bambara, North Carolina State University, Bugwood.org*

**Common Name:** Black timber bark beetle

**Scientific Name:** *Xylosandrus germanus*



*A close-up of a Black Timber Bark Beetle larva*

### Host Plants-

- Ash\*
- Beech
- Birch
- Dogwood
- Holly
- Linden
- Maple\*
- Pine
- Willow
- 100+ others



*Photo credit: J.R. Baker & S.B. Bambara, North Carolina State University, Bugwood.org*

**Common Name:** Granulate ambrosia beetle

**Scientific Name:** *Xylosandrus crassiusculus*



*A close-up of a host plant with tunnels where eggs would be hatched.*

### Host Plants-

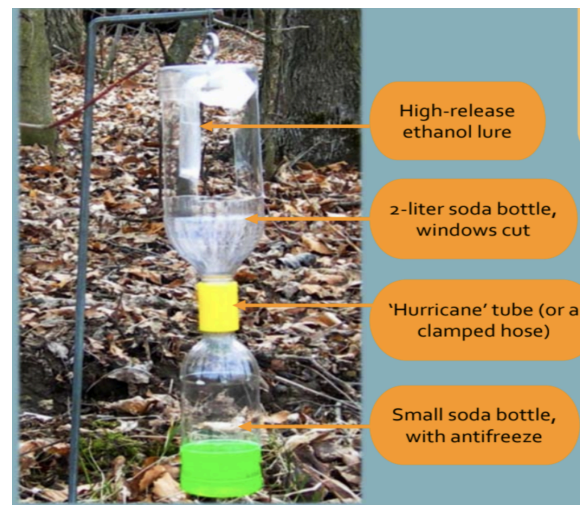
- Beech
- Cherry
- Crape myrtle
- Dogwood
- Locust
- Magnolia
- Maple\*
- Oaks
- Redbud
- Tulip poplar
- 100+ others

## Possible Symptoms

- Wilted foliage
- Discoloration
- Cankers
- Frass toothpicks
- 1-mm entry/exit holes in the bark
- Sap production from wounds
- Necrosis
- Gummosis
- Early senescence
- Dieback



*Frass toothpicks in *asimina triloba* Monitoring Photo credit: P. Schultz, V. Tech*



*A graphic that shows: High-release ethanol lure, a 2-liter soda bottle, windows cut, Hurricane tube (or a clamped hose, and a small soda bottle with antifreeze.*

Bark beetles are drawn to ethanol production from stressed plants.



*Sap production in *styrax japonica* Photo credit: P. Schultz, V. Tech*

# Monitoring

Monitor bark beetle flight activity and populations with an ethanol lure in a modified bottle trap. Stressed trees produce ethanol even if they appear outwardly healthy, which attracts beetles looking for new hosts.

# Management

Properly planted, healthy plants are the best management tool.

If used properly, bark sprays can protect healthy trees while killing beetle broods within infested plants.

**Contact your local cooperative extension office for information on the best products to manage this pest population.**

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